

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A stable immunogenic product for inducing antibodies raised against a TNF α protein in a subject, the immunogenic product comprising protein immunogenic heterocomplexes comprising TNF α protein molecules associated with KLH carrier protein molecules, ~~wherein~~ more than 1% and less than 40% of the TNF α protein molecules are directly covalently linked to the KLH carrier protein molecules, and more than 60% of the TNF α protein molecules are non-covalently associated with the KLH carrier protein, wherein

said stable immunogenic product is produced by a process comprising the following steps:

a) incubating TNF α proteins and KLH carrier molecules in a molar ratio TNF α :KLH ranging from 10:1 to 50:1 in the presence of glutaraldehyde to produce immunogenic heterocomplexes;

b) removing excess glutaraldehyde;

c) stabilizing the immunogenic heterocomplexes with formaldehyde;

d) adding glycine to block the reaction with formaldehyde in step c);

e) performing a dialysis of the product obtained at step d); and

f) collecting the product comprising immunogenic heterocomplexes prepared at step e).

2. (previously presented) An immunogenic product according to claim 1, wherein each immunogenic heterocomplex comprises a plurality of TNF α proteins covalently linked to a KLH carrier protein molecule.

3. (previously presented) An immunogenic product according to claim 2, wherein the plurality of TNF α proteins is a plurality of specimens of a single TNF α protein.

4-20. (cancelled)

21. (previously presented) A composition comprising an immunogenic product according to claim 1.

22. (previously presented) A pharmaceutical composition comprising an immunogenic product according to claim 1 in association with one or more physiologically compatible excipients.

23. (previously presented) An immunogenic composition comprising an immunogenic product according to claim 1 in association with one or more physiologically compatible excipients.

24. (previously presented) A vaccine composition comprising an immunogenic product according to claim 1 in association with one or more physiologically compatible excipients.

25. (previously presented) An immunogenic composition according to claim 23, comprising a CpG immunity adjuvant.

26. (withdrawn - currently amended) A method for preparing an immunogenic product according to claim 1, comprising:

a) incubating TNF α proteins and KLH carrier molecule in a molar ratio TNF α :KLH ranging from 10:1 to 50:1 in the presence of ~~a chemical binding agent~~ glutaraldehyde to produce immunogenic heterocomplexes;

b) removing excess glutaraldehyde;

c) adding formaldehyde to stabilize the immunogenic heterocomplexes;

d) adding glycine to block the reaction with formaldehyde in step c);

e) performing a dialysis of the product obtained in step d); and

b) f) collecting the immunogenic product comprising immunogenic heterocomplexes prepared in step a) e).

27. (cancelled)

28. (cancelled)

29. (cancelled)

30. (new) An immunogenic product according to claim 1, wherein in step a) the TNF α proteins and the KLH carrier molecules are incubated in the presence of glutaraldehyde at a final concentration between 0.002 - 0.03M, for 20 - 60 minutes.

31. (new) The immunogenic product according to claim 30, wherein dialysis of the product in step e) occurs by means of a dialysis membrane having a 3 kDa cutoff.

32. (new) The immunogenic product according to claim 30, wherein in step c) the immunogenic heterocomplexes are stabilized by adding formaldehyde to a final concentration of about 33 mM for 12 to 48 hours.

33. (new) The immunogenic product according to claim 32, wherein in step d) the reaction is blocked by adding glycine to a final concentration of about 0.1M for about 1 hour.